



MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY

# Water Use Advisory Council

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October 12, 2021

# 1. Welcome

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# WUAC Chair Order for 10/12/21

- Laura Campbell, Manager (Items 1-6)  
Agricultural Ecology Department  
Michigan Farm Bureau
- Bryan Burroughs, Executive Director (Item 7)  
Michigan Trout Unlimited
- Brian Eggers, Principal (Items 8-11)  
AKT Peerless Environmental

## Water Use Advisory Council (WUAC) Meeting

Hosted by the Department of Environment, Great Lakes, and Energy (EGLE)

**Tuesday, October 12, 2021**

**1:00 p.m.- 3:00 p.m.**

Patriot Conference Room

North Atrium, Constitution Hall

525 West Allegan

Lansing, MI 48933

Remote Option Available Via Teams

[Click here to join the meeting](#)

Or call in (audio only)

[+1 248-509-0316,272279985#](#) United States, Pontiac

Phone Conference ID: 272 279 985#

### AGENDA

1. Welcome
2. Roll Call
3. Approval of Agenda-Roll Call Vote
4. Approval of Minutes-Roll Call Vote
5. Public Comment (3 Minute Limit)
6. Legislative Report Implementation Update
7. Committee Chairs Reports
  - A. Data Collection Committee
  - B. Implementation Committee
  - C. Models Committee
  - D. New Topics Committee
  - E. Conservation and Efficiency Committee
8. EGLE Update
9. Next Meeting Dates and Formats
10. Open Comments (3 Minute Limit)
11. Motion to Adjourn

**2. Roll Call**

**3. Approval of Agenda –Roll Call Vote**

**4. Approval of Minutes—Roll Call Vote**

# 5. Public Comment

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## 6. Legislative Report Implementation Update

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# Co-Chair Bryan Burroughs

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## Agenda Item 7



# 7. Committee Chair Reports

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# A. Data Collection Committee

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Bryan Burroughs

# B. Implementation Strategies Committee

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Laura Campbell  
Doug Needham

# C. Models Committee

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Dave Hamilton

Jim Nicholas

# Water Use Advisory Council









## Models Committee Recommendation:

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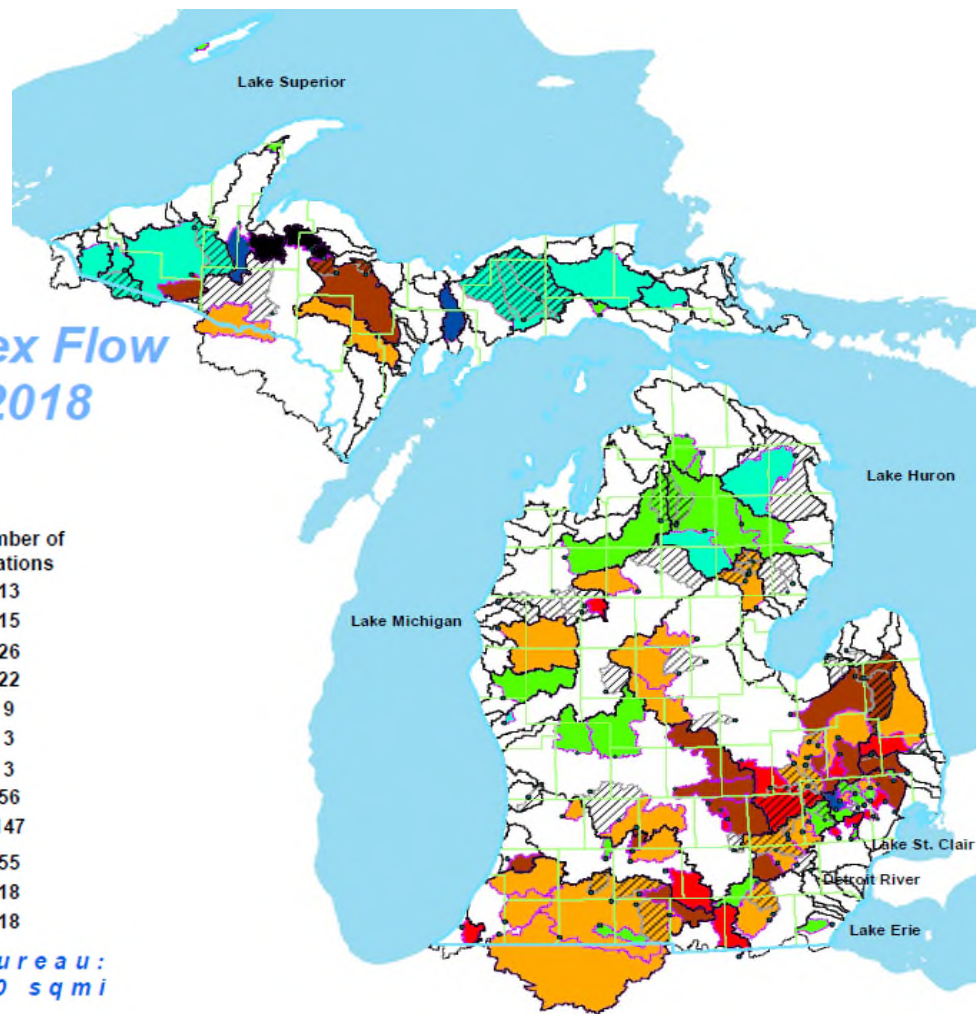
Index Flows  
October 10, 2021

# Michigan's % change of Index Flow From Water Year 2007 to 2018

Processed on August 18, 2021

	Classes	% of Total area of the State	Number of Stations
Above 9.0%		2	13
5.0% to 8.9%		6	15
1.1% to 4.9%		11.6	26
-1.0% to 1.0%		7	22
-4.9% to -1.1%		5.6	9
-8.9% to -5.0%		0.7	3
Below -9.0%		0.6	3
Discontinued Station			56
<b>Totals</b>			<b>147</b>
Increased		19.6	55
No Change		4.4	18
Decreased		8.9	18

Based on U.S. Census Bureau:  
Total area of Michigan is 56,538.0 sqmi

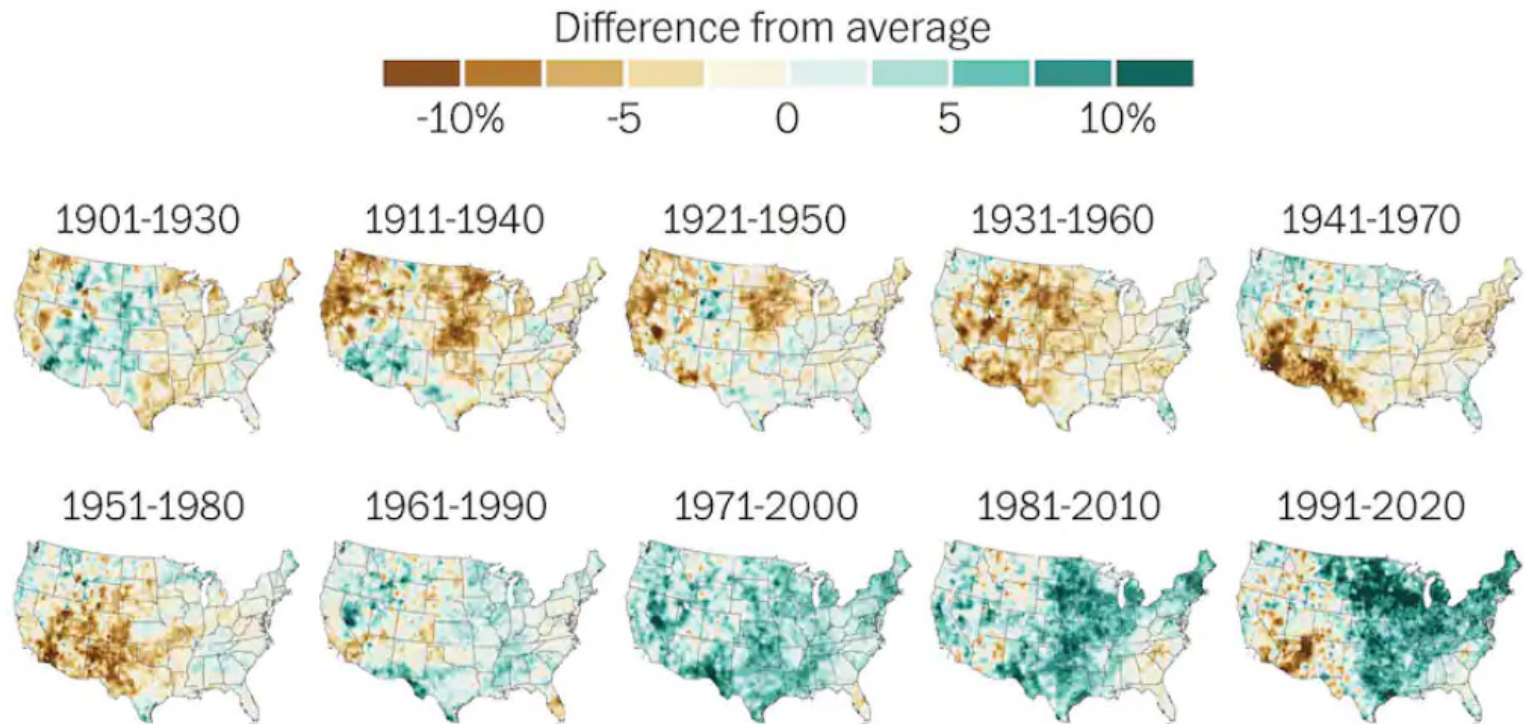


COMPARISON OF THE 147 GAGE STATIONS INDEX FLOW PUBLISHED ON REPORT " A REGRESSION MODEL FOR COMPUTING INDEX FLOWS DESCRIBING THE MEDIAN FLOW FOR THE SUMMER MONTH OF LOWEST FLOW IN MICHIGAN" (TABLE 1.1) AND THE UPDATED VALUES WITH THE PERIOD OF RECORDED EXTENDED UNTIL THE WATER YEAR 2018.

U.S. Geological Survey		Drainage area	Minimum summer monthly median flow (cubic feet per second)	Summer month of minimum flow	Years of record	Water years included in analyses	Minimum summer monthly median flow (cubic feet per second)	Summer month of minimum flow	Years of record	Water years included in analyses	change IF (cfs)	%Change IF by extended record
station number	Station name	(square miles)	( <i>IQ</i> <i>u</i> )									
04001000	Washington Creek at Windigo, Mich.	13.2	2.3	August	39	1965–2003	2.3	August	54	1965–2018	0.0	0.0%
04031000	Black River near Bessemer, Mich.	200	40.0	August	33	1955–1982, 2001–2005	38.2	August	46	1955–1982, 2001–2018	-1.9	-4.6%
04031500	Presque Isle River at Marenisco, Mich.	172	71.0	August	38	1945–1982	71.0	August	37	1945–1982	0.0	
04032000	Presque Isle River near Tula, Mich.	264	90.0	August	29	1945–1973	87.0	August	35	1945–1973, 2011–2012, 2014–2018	-3.0	-3.3%
04033000	Middle Branch Ontonagon River near Paulding, Mich.	162	100	August	59	1943–1995, 2001–2005	107	August	71	1943–1995, 2001–2018	7.0	7.0%
04035000	East Br Ontonagon River near Mass, Mich.	273	134	August	38	1942–1979	134	August	38	1942–1979	0.0	
04040000	Ontonagon River near Rockland, Mich.	1330	634	August	64	1942–2005	603	August	77	1942–2018	-31.0	-4.9%
04040500	Sturgeon River near Sidnaw, Mich.	169	44.0	August	66	1913–1915, 1943–2005	40.0	August	79	1913–1915, 1943–2018	-4.0	-9.1%
04041500	Sturgeon River near Alston, Mich.	343	184	August	72	1932–1940, 1943–2005	173	August	85	1932–1940, 1943–2018	-11.0	-6.4%
04043050	Trap Rock River near Lake Linden, Mich.	29.6	13.0	August	39	1967–2005	13.0	August	52	1967–2018	0.0	0.0%
04045500	Tahquamenon River near Paradise, Mich.	757	321	August	52	1954–2005	311	August	65	1954–2018	-10.0	-3.1%
04046000	Black River near Garnet, Mich.	33.5	10.0	August	38	1952–1978,	10.0	August	51	1952–1978,	0.0	0.0%

Statistics from the 90 updated gages:			Average=	3.7
			Max=	45.0
			Min=	-12.5
			Median	2.3
			Std Dev	8.5

## U.S. 30-year precipitation compared with 20th-century average



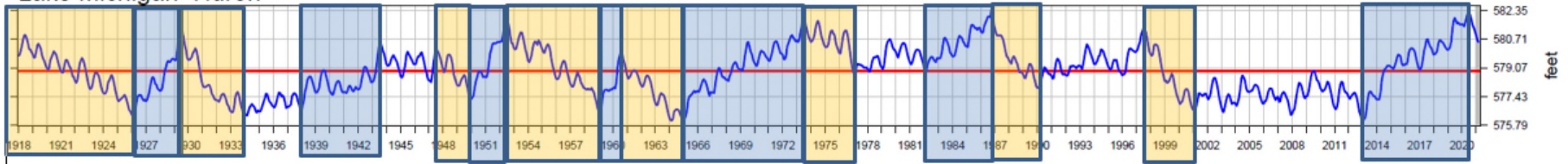
Source: NCEI and NOAA Climate.gov

THE WASHINGTON POST

U.S. 30-year precipitation compared with 20th-century average (The Washington Post)



## Lake Michigan-Huron



Wetter period

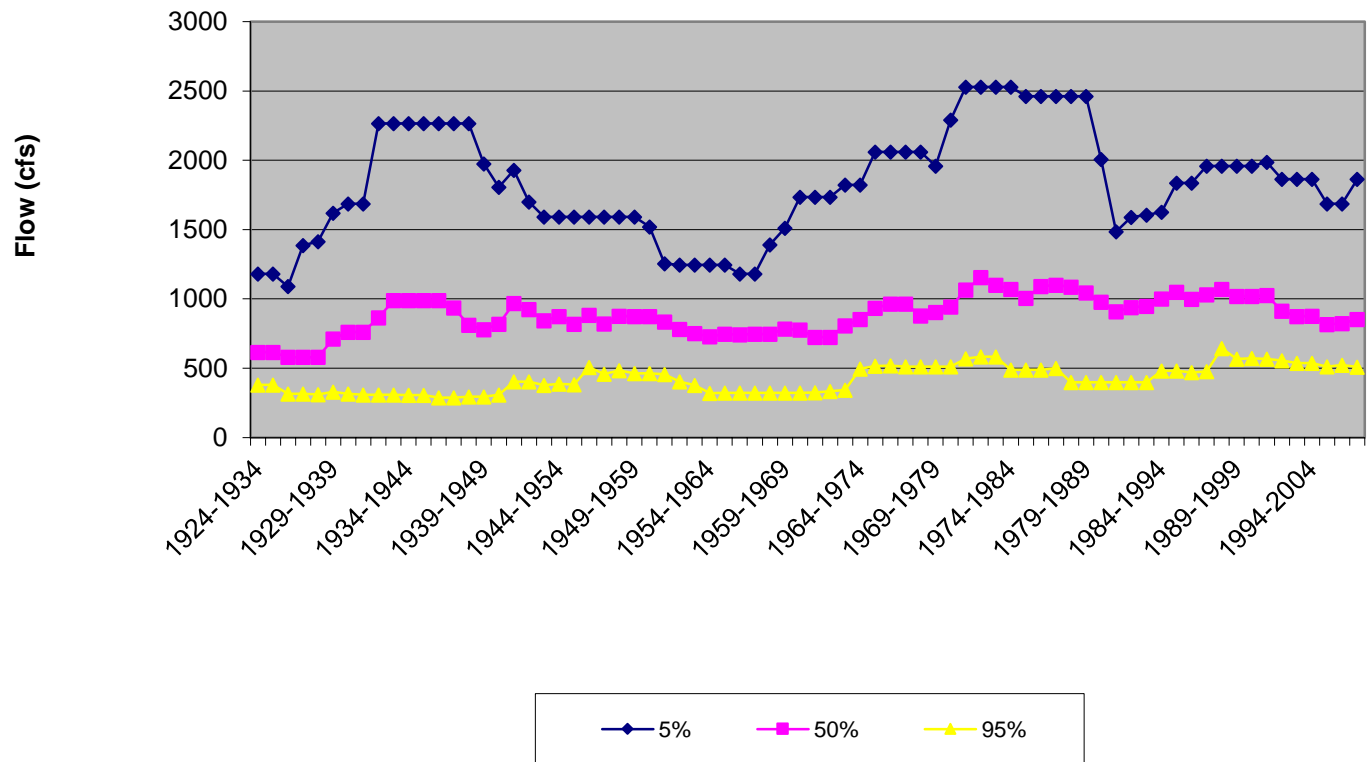
Rising lake  
Levels

Dryer period

Lower lake  
levels

Lake levels from COE  
DAH 5/5/2021

# 04099000 - ST. JOSEPH RIVER AT MOTTVILLE, MI



## SW MI 10 yr moving avg through WY2007

Period/St	4096405	4096600	4097170	4097540	4099000	4101500	4101800	4102500	4105000
All Years	71	72	30	47	860	1980	179	262	72
1954-1964					728.5	1750		199.5	50
1968-1978	65.5	72	29.5	40	878	1925	182	272.5	78
1986-1996	77			51	998.5	2280	202.5	300.5	87.5
1996-2006	72			45	823.5	1925	165	238	74
1997-2007	74			46	853	1935	166.5	237	72
Index Flow	61	65	30	46	860	1880	179	263	71
2010-2014	72			40	840	1780	181	287	104
2015-2019	59			47	1060	2435	237	354	93









Period/St	4108801	4111500	4112000	4112500	4115000	4116500	4117000	4117500	4118000	4118500
All Years	4.7	0.92	0.28	42	35	222	2.8	110	281	127
1954-1964		1.1	0.32	45	28	209	2.1	83	216	101.5
1968-1978	3.8	0.69	0.29	40	35	244.5		111	302.5	119
1986-1996	6.2	1.6	0.32	63	55			151.5		
1996-2006	5.8	0.88	0.2	44	30		2.95	110		125.5
1997-2007	5.2	0.77	0.2	41	27		2.9	110		126
Index Flow	4.3	0.9	0.25	39	31	222	2.8	109	281	127
2010-2014		2.6	0.6	51	29		3.8	140		130
2015-2019			0.3	58	43			143		131

## 5 yr moving avg dry periods long term gages

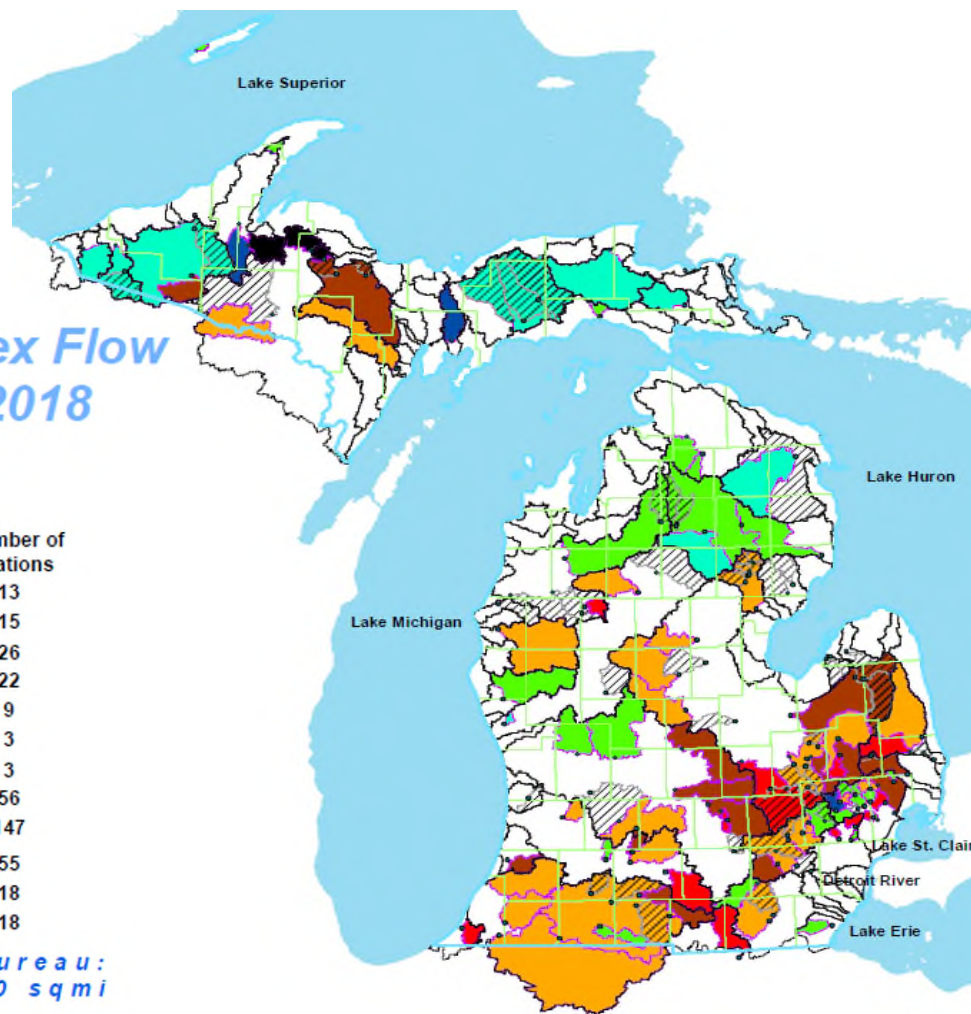
Station	2015-2019	2010-2014	1997-2001	1987-1991	1973-1977	Index Flow	1997-2001	1987-1991	1973-1977	Avg	
4096405	59.25	72.05	74	48	57	61	1.21	0.79	0.93	0.98	St. Joseph River at Burlington, Mich.
4096600	NA	NA	NA	36	57.5	65	NA	0.55	0.88	0.72	Coldwater River near Hodunk, Mich.
4097170	NA	NA	NA	NA	24	30	NA	NA	0.80	0.80	Portage River near Vicksburg, Mich.
4097540	47.45	40.1	45	45	42.5	46	0.98	0.98	0.92	0.96	Prairie River near Nottawa, Mich.
4099000	1060	840.5	810	851	958	850	0.95	1.00	1.13	1.03	St. Joseph River at Mottville, Mich.
4101500	2435	1780	1930	2040	1965	1850	1.04	1.10	1.06	1.07	St. Joseph River at Niles, Mich.
4101800	237	181	164	179	181	177	0.93	1.01	1.02	0.99	Dowagiac River at Sumnerville, Mich.
4102500	353.5	287	233	279	294.5	262	0.89	1.06	1.12	1.03	Paw Paw River at Riverside, Mich.
4105000	92.75	103.5	71	78	84	70	1.01	1.11	1.20	1.11	Battle Creek at Battle Creek, Mich.
4108801	NA	NA	5.65	4.6	3.1	4.3	1.31	1.07	0.72	1.03	Macatawa River near Zeeland, Mich.
4111500	NA	2.565	1.2	0.87	0.625	0.9	1.33	0.97	0.69	1.00	Deer Creek near Dansville, Mich.
4112000	0.34	0.59	0.305	0.165	0.19	0.2	1.53	0.83	0.95	1.10	Sloan Creek near Williamston, Mich.
4112500	58	50.7	48.5	45	36	38	1.28	1.18	0.95	1.14	Red Cedar River at East Lansing, Mich.
4114498	59.75	55.4	NA	55	42	40	NA	1.38	1.05	1.21	Looking Glass River near Eagle, Mich.
4115000	43.1	28.85	28.5	47	29	30	0.95	1.57	0.97	1.16	Maple River at Maple Rapids, Mich.
4116500	NA	NA	NA	NA	282.5	222	NA	NA	1.27	1.27	Flat River at Smyrna, Mich.
4117000	NA	3.8	3.1	NA	4	2.8	1.11	NA	1.43	1.27	Quaker Brook near Nashville, Mich.
4117500	143	140	105	133	113	109	0.96	1.22	1.04	1.07	Thornapple River near Hastings, Mich.
4118000	NA	NA	NA	322	319	281	NA	1.15	1.14	1.14	Thornapple River near Caledonia, Mich.
4118500	131	130	125	155	131	127	0.98	1.22	1.03	1.08	Rogue River near Rockford, Mich.
4121000	NA	NA	NA	NA	141	115	NA	NA	1.23	1.23	Muskegon River near Merritt, Mich.
4122200	295	274	253	294	299	273	0.93	1.08	1.10	1.03	White River near Whitehall, Mich.
4122500	509	469.5	445	503	494	455	0.98	1.11	1.09	1.06	Pere Marquette River at Scottville, Mich.
4123000	NA	NA	NA	NA	100	101	NA	NA	0.99	0.99	Big Sable River near Freesoil, Mich.
4123500	NA	NA	NA	NA	174	170	NA	NA	1.02	1.02	Manistee River near Grayling, Mich.

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Based on U.S. Census Bureau:  
Total area of Michigan is 56,538.0 sqmi



# D. New Topics Committee

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Pat Staskiewicz

Jason Walther

# E. Conservation and Efficiency Committee

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Emily Finnell  
Kelly Turner

# Water Conservation and Efficiency Committee

- Added new members to the committee
- Continued Speaker series to build knowledge base of current water conservation and efficiency practices
  - Tribal Perspectives
  - EPA WaterSense Program
- Subcommittee formed to advance WUAC Ag Efficiency Recommendation
  - First meeting Oct 14th
- University of Michigan Dow Fellows Team Draft Project Report under development on Assessment of Climate, Energy, Water Infrastructure and Sustainability Programs and Policies in Michigan and Great Lakes Region
- Reviewing and contributing to 2021 MI Water Conservation and Efficiency Annual Program Assessment



# Co-Chair Brian Eggers

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Agenda Items 8-11



MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY

# Program Update

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Water Use Advisory Council

October 12, 2021

# Outline

- WUAU Personnel Update
- Program Metrics
- Depleted WMA Status Update
- BlueTriton (formerly Nestle) Update
- Great Lakes Compact Update
- Questions

# WUAU Personnel Update

- Naomi Morgan resigned
- Contingent offer made to fill her position

# Compliance Numbers

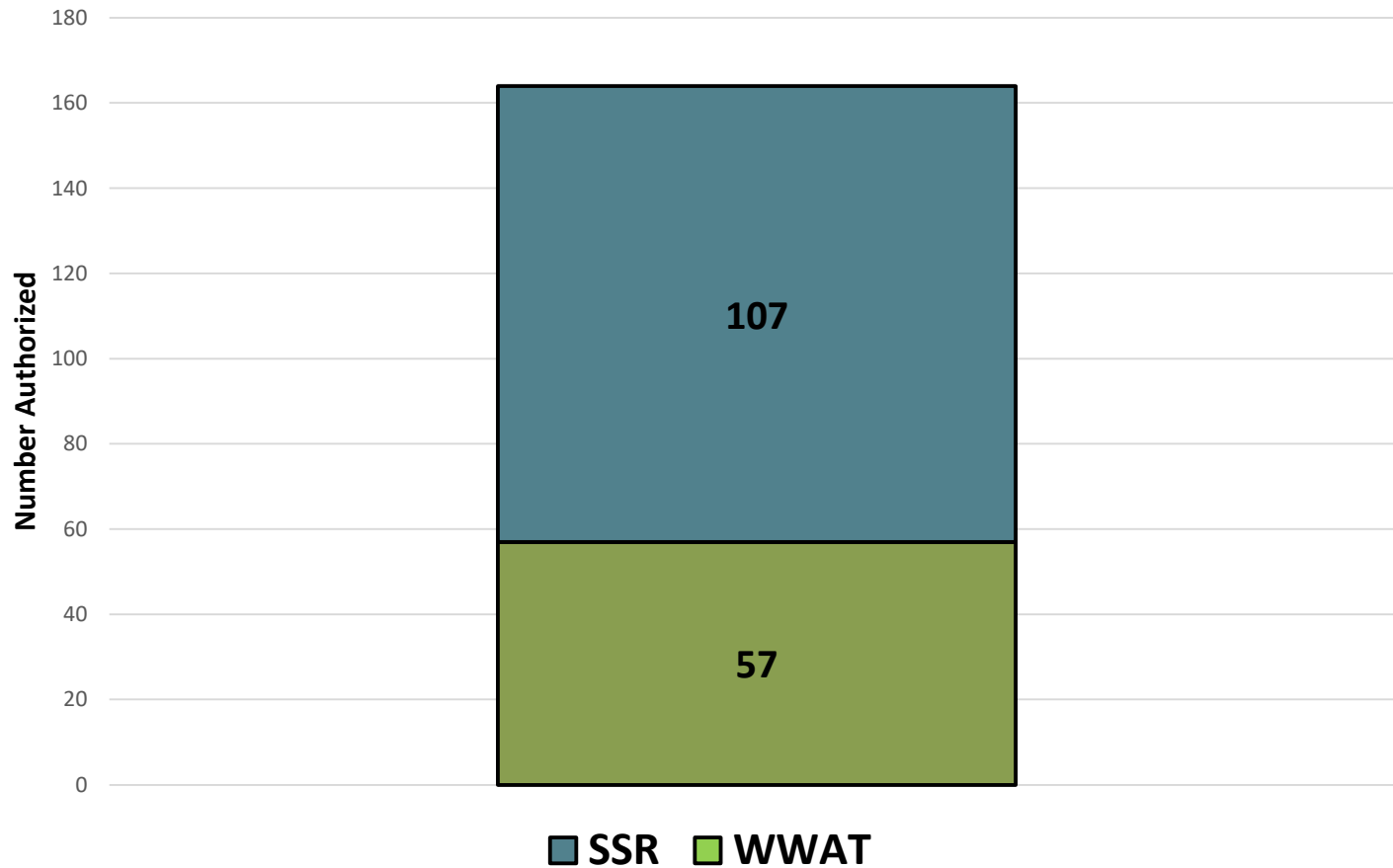
- Compliance Communications 201
  - After the Fact Registrations 17
  - Missing Pump Information Requests 53
  - Revised Registrations 73
  - Installation Verification Requests 58
- Violation Notices 12
- Complaints 6

# Quarterly Metrics

July 9, 2021-September 30, 2021

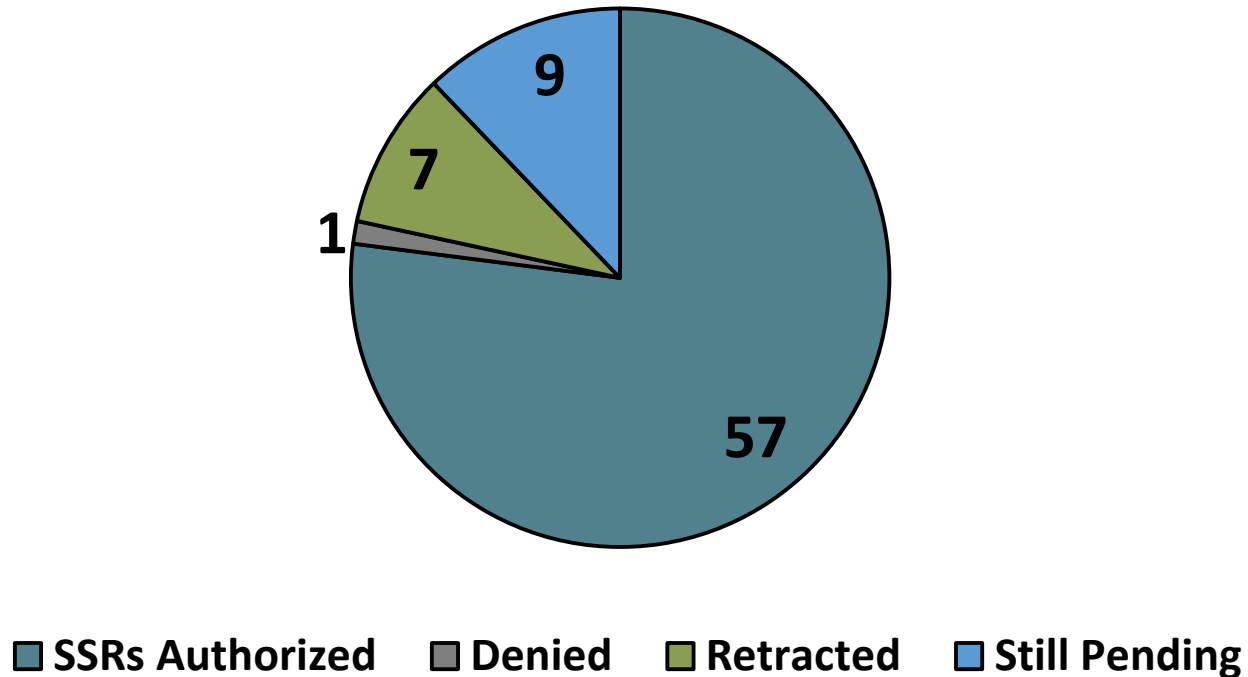
- 5 Pre-screening Reviews Passed
- 0 Pre-screening Reviews Denied
- 0 Pre-screening Reviews Retracted
- 0 327 Permits Issued

## LQWs Authorized During Program Year 13: WWAT & SSR



July 9, 2021 – September 30, 2021

## Total SSRs Received and Determinations Made During Program Year 13



July 9, 2021 – September 30, 2021



## Program Year 13 Timeliness

Average Number of Business Days  
from Receipt of SSR Request:

**8 Days**

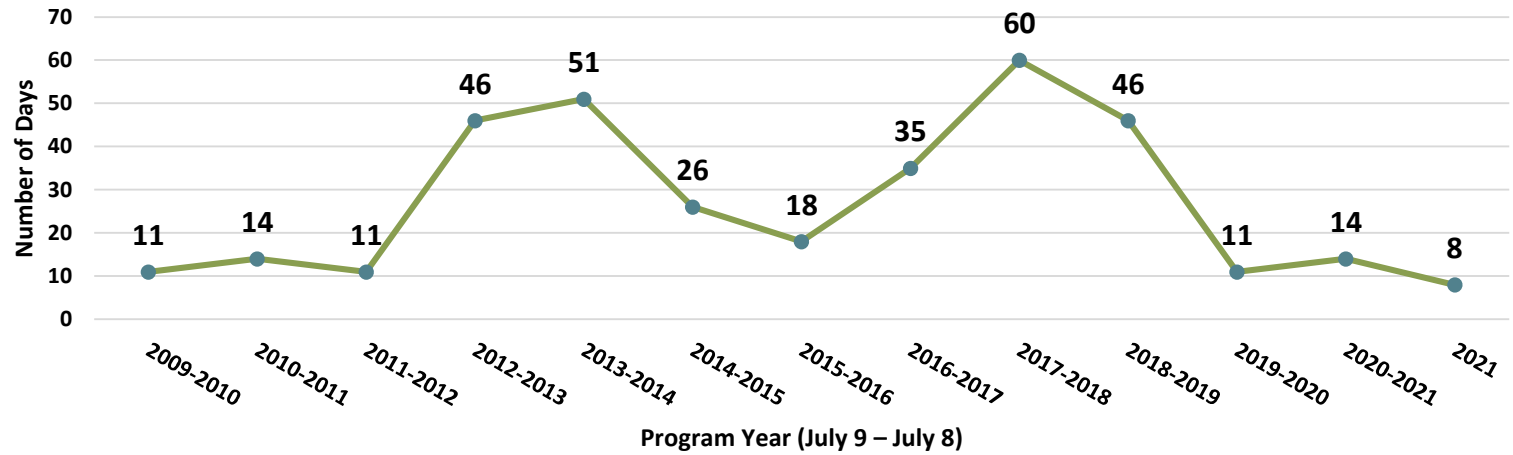
Percentage of SSRs completed  
within 10 Business Days:

**92%**

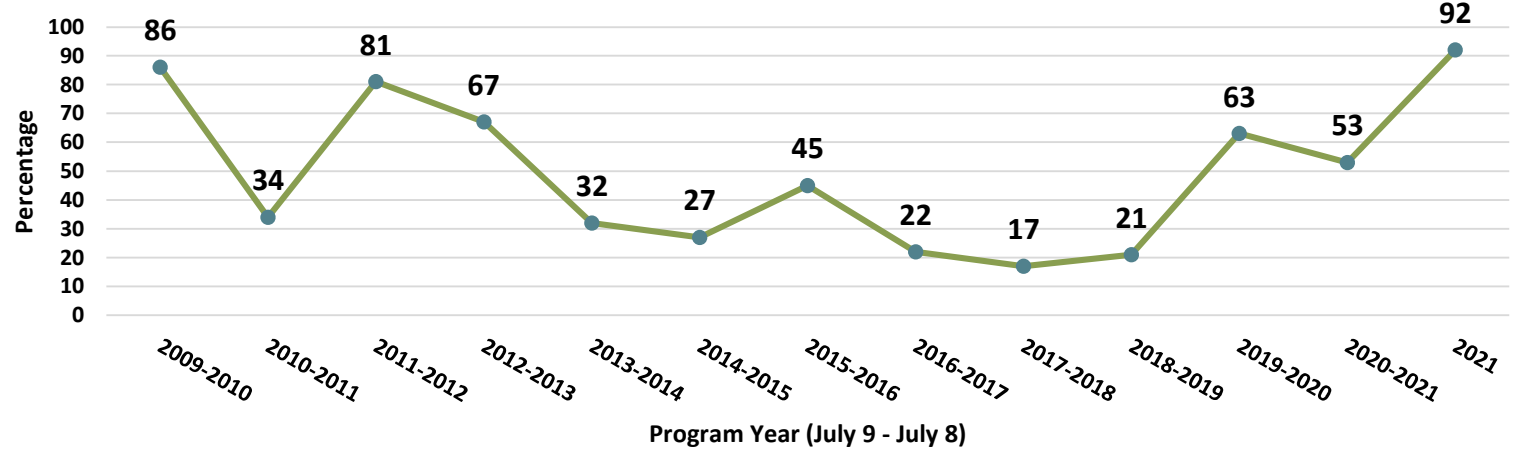
Statutory Deadline: 10 Business Days

July 9, 2021 – September 30, 2021

### Average Number of Business Days from Receipt of SSR Request



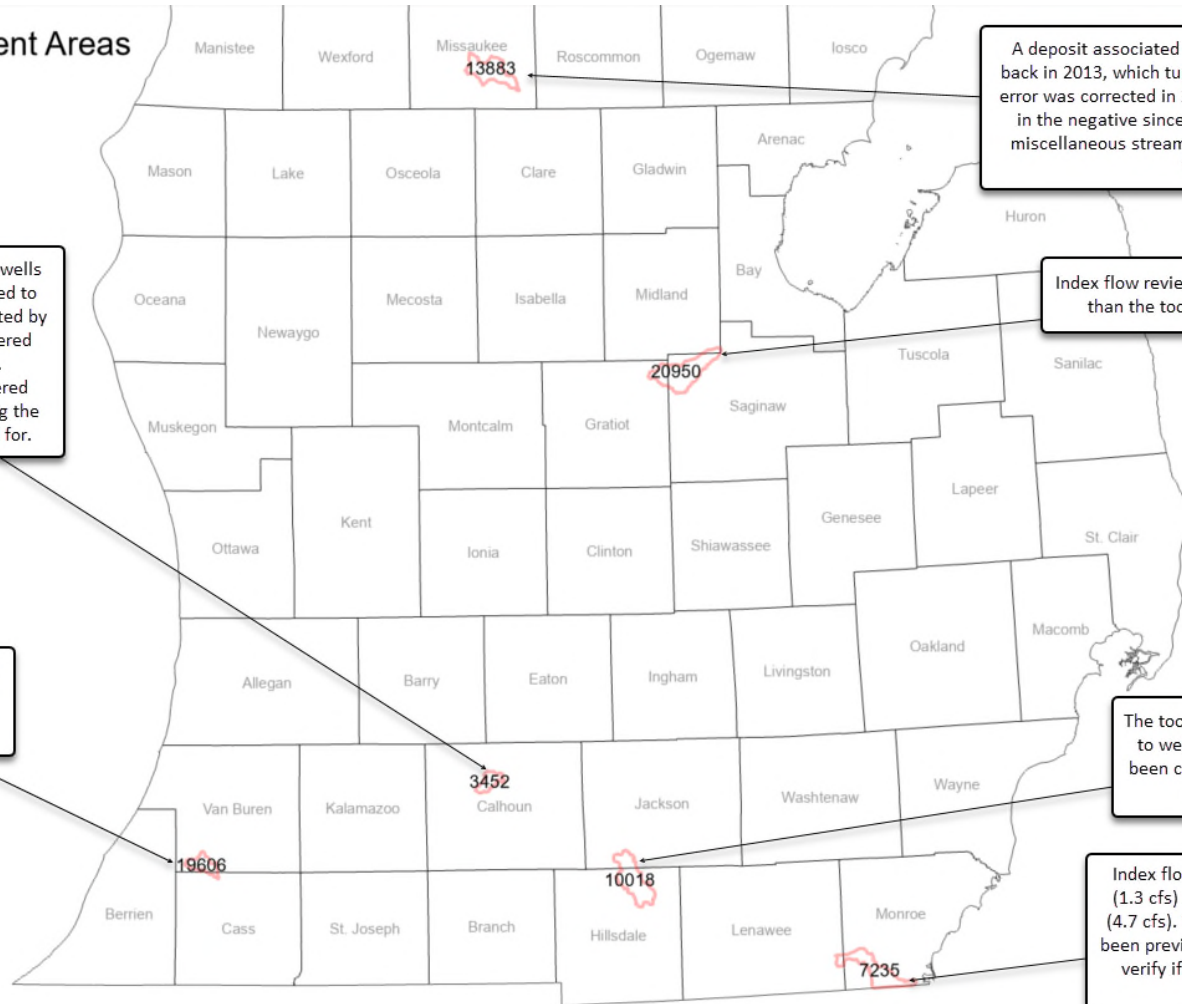
### Percentage of SSRs Completed within 10 Business Days



# Depleted Watersheds as of 10/5/2021

Name	Number	County	Type	Index Flow (gpm)	Allowable Depletions	Current Depletions
South Branch Kalamazoo River	10018	Hillsdale/Jackson	Cool Stream	1930	482	-357
Halfway Creek	7235	Monroe/Lenawee	Warm Stream	583	140	-101
Whitmore Drain	20950	Saginaw/Gratiot/ Midland	Warm Stream	135	32	-33
Dickinson Creek (USGS Station #: 041035285)	3452	Calhoun	Cold Transitional Stream	898	39	-58
Osborn Drain (USGS Station #: 041015313)	19606	Van Buren/Cass	Cold Transitional Stream	1571	63	-39
Butterfield Creek	13883	Missaukee	Cold Transitional Stream	6732	269	-26

## Depleted Water Management Areas October 5, 2021



The tool previously gave bedrock auto pass to wells that are not confined; a gage has been installed to monitor the WMA. Two SSRs have been requested by a new property owner for previously unregistered wells, a study is in progress for the WMA. Additionally, this WMA contains an unregistered irrigation well on tribal land, which is depleting the WMA 8gpm, which is not currently accounted for.

Pending a package of SSRs which were submitted in response to a violation notice, a study is in progress for the WMA.

A deposit associated with an Oct-July was made back in 2013, which turned out to be made in error; error was corrected in 2015 and the WMA has been in the negative since. EGLE has been collecting miscellaneous stream flow measurements in the WMA.

Index flow review found significantly less (0.3 cfs) than the tool originally predicted (2.8 cfs).

The tool previously gave bedrock auto pass to wells that are not confined; EGLE has been collecting miscellaneous stream flow measurements in the WMA.

Index flow review found significantly less (1.3 cfs) than the tool originally predicted (4.7 cfs). Waiting for a withdrawal that has been previously authorized to be installed to verify if the withdrawal is isolated from surface water.

# BlueTriton (formerly Nestle) Update

- Surrendered their SDWA Permit
- Canceled registration for 400 gpm
- WWAT registration for 38 gpm increase
- Total registered capacity 288 gpm

# Great Lakes Compact Update

- 5-year cumulative impact assessment due December 2023
- Target completion date December 2022
- Focus areas include:
  - Levels of uncertainty in data
  - Past climate impacts on the water budget
  - Future climate impacts on the water budget
  - Demand forecasts for water use sectors

# Questions?

Jim Milne  
Water Use Assessment Unit  
EGLE Water Resources Division  
517-285-3253  
[milnej@michigan.gov](mailto:milnej@michigan.gov)

Michigan Department of  
**Environment, Great Lakes, and Energy**

800-662-9278

Michigan.gov/EGLE



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## 9. Next Meeting Dates and Formats

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- December 14, 2021

# 10. Open Comments

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# 11. Motion to Adjourn

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